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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/710,494

07/15/2004

Sharon A. Free

00124-01080-US

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08/01/2006

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EXAMINER

HWU, DAVIS D

ART UNIT

PAPER NUMBER

3752

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/710,494	Applicant(s) FREE ET AL.	
	Examiner Davis D. Hwu	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/19/04, 9/24/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-6, in the reply filed on 22 June 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an **election without traverse** (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Macdonald et al. (GB 1,341,693).

Regarding claim 1, Macdonald ('693) teaches a method for suppressing an explosion in a fuel tank, comprising installing into the tank a reticulated polyurethane foam (*page 1, line 31*) having a density less than 1.0 pounds per cubic foot [16 kg/m^3] (*page 1, line 51*). Regarding claim 2, Macdonald ('693) teaches a method wherein the polyurethane foam has a density of from 0.6 to 0.9 pounds per cubic foot [$9.6 \text{ to } 14.4 \text{ kg/m}^3$] (*page 2, line 34*). Regarding claim 5, Macdonald ('693) teaches a method wherein the tank has an inner volume and the foam fills from 50 to 90% of the inner volume of the tank (*page 2, line 70-74*). Regarding claim 6, Macdonald ('693) teaches a method wherein the fuel tank is an aircraft fuel tank (*page 1, line 64*).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over obvious over Macdonald et al. (GB 1,341,693), as applied to claim 1, in view of Cope et al. (US 5,028,355).

Regarding claim 3, Macdonald ('693) teaches a method discussed above, however, fails to teach wherein the polyurethane foam has a volume electrical resistivity of less than 10^{12} ohm-cm at 70°F [21.1°C]. However, Cope ('355) teaches wherein the polyurethane foam has a volume electrical resistivity of less than 10^{12} ohm-cm at 70°F [21.1°C] (*col. 16 lines 34-55*) for the purpose of dissipating or controlling static charges to eliminate internal explosions. It would have been obvious to a person of ordinary skill in the art at the time applicant's invention was made to provide a polyurethane foam that has a volume electrical resistivity of less than 10^{12} ohm-cm at 70°F [21.1°C] as taught by Cope ('355) in Macdonald ('693) to provide a method of suppressing an explosion by dissipating or controlling static charges. Regarding claim 4, Cope also teaches the polyurethane foam being reticulated by thermal reticulation (*col. 3, line 57*) for the purpose of providing a large void volume. It would have been obvious to a person of ordinary skill in the art at the time applicant's invention was made to provide a polyurethane foam that has been reticulated by thermal reticulation as taught by Cope

('355) in Macdonald ('693) to provide a method of suppressing an explosion with a foam with a large void volume.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davis D. Hwu whose telephone number is 571-272-4904. The examiner can normally be reached on 8:00-4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 571-272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**DAVIS HWU
PRIMARY EXAMINER**

Davis Hwu